

REMARKS

This Amendment is filed in response to the office action dated January 11, 2005. Accompanying this Amendment is a Petition for Extension of Time under 37 CFR 1.136(a) with the requisite fees, extending the period for response by three months, to July 11, 2005. Upon entry of this Amendment, claims 13-23 are pending in this application.

Applicant acknowledges with appreciation the Examiner's statement regarding allowable subject matter and that claims 17-23 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Applicant respectfully requests reconsideration of the additional claims in light of the following remarks.

The Examiner rejects Claim 13 under 35 U.S.C. §103(a) as allegedly unpatentable over Budrow et al. (USP 3,665,477), in view of Brankovic (USP 6,198,460). The Examiner further rejects claims 14-15 under 35 U.S.C. §103(a) as allegedly unpatentable over Budrow et al. in view of Brankovic, and further in view of Faulkner et al. (USP 6,023,209). The Examiner also rejects claim 16 under 35 U.S.C. §103(a) as allegedly unpatentable over Budrow et al. in view of Brankovic, and further in view of Knipe et al. (USP 5,652,671). Applicant respectfully traverse these rejections and submit that the claims are patentable over the cited references.

To establish a prima facie case of obviousness under 35 U.S.C. §103(a), three criteria must be met. First, there must be some suggestion or motivation, either in the cited references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the cited reference relied upon by the Examiner to arrive at the claimed invention. Second, there must be a reasonable expectation that the suggested modification or combination would be successful. Finally, the prior art reference (or references when combined) must teach or suggest each and every limitation of the rejected claims. The teaching or suggestion to make the claimed modification or combination and the reasonable expectation of success must both be found in the prior art, and not based upon in the applicant's disclosure. M.P.E.P. §706.02.

Budrow teaches an elevatable and foldable antenna having dipole signal receiving elements pivotally mounted on an antenna body supported upon a parallelogram linkage connected to a rotatable base member. Budrow is not a MEMs device, but is a large scale macro antenna with large mechanical elements and linkages. Budrow does not teach or suggest a MEMs type device as recited in Applicant's claims. In a MEMs device the components are

monolithically formed on a semiconductor device. There is no reasonable suggestion or teaching in Budrow regarding a MEMs device.

Applicant respectfully submits that Brankovic adds nothing more. Brankovic describes an antenna support structure for at least three directional antenna sub-systems wherein the antenna subsystems can be preferably planar antenna arrays. The Examiner refers to Figure 4, reference numeral 7 and col. 5, lines 15-23 as showing two actuator mechanisms and states that it would have been obvious at the time of the invention to use two actuator mechanisms as disclosed in Brankovic instead of one as disclosed in Budrow. Applicant respectfully disagrees. As stated above, Budrow does not teach or reasonably suggest a MEMs antenna device. If one were to combine Budrow and Brankovic one would not arrive at a MEMs antenna as recited in Applicants claims.

The Examiner states that Budrow and Brankovic do not disclose CPS or CPW transmission lines. Indeed, Budrow and Brankovic fail to teach or suggest a MEM antenna device at all, much CPS or CPW transmission lines comprising conductors.

The Examiner cites Faulkner as disclosing the use of CPW and CPS transmissions lines. Faulkner teaches a coplanar microwave circuit formed on a surface of a substrate with resistive film dimensions and resistivity selected to suppress various spurious electromagnetic modes. Faulkner is limited to coplanar microwave transmission lines and does not teach or reasonably suggest a MEMs antenna device as recited in Applicant's claims.

Applicant does not see the motivation to combine Budrow, Brankovic and Faulkner. Brankovic teaches a very specific antenna support for supporting at least three antenna sub-systems. Budrow teaches specific design of a macro antenna that is elevatable and foldable. It is not at all obvious that combining these features with the teaching of Faulkner would result in an operable antenna or that the recited purposes of the products would be achieved by such combination. Antenna design is complicated and require significant study and experimentation to produce a functioning device. Even if one were to combine the teachings of Budrow, Brankovic and Faulkner as the Examiner suggests, one would not arrive at the present invention.

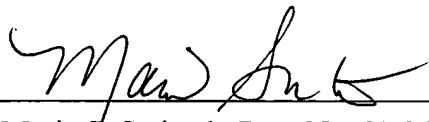
The Examiner states that Budrow and Brankovic do not disclose micro-mechanical hinges. The Examiner cites Knipe as motivation to miniaturize the hinges and states the subject invention is obvious. Applicant respectfully disagrees and traverses this rejection. Knipe describes a hinge having alternative layers of a first material and a second material. The materials used for the layers can be selected on the basis of different desired properties. For

example, layers of a "parent" material that is conventionally used for the hinge because of its amenability to the process flow may be alternated with layers of an "enhancer" material that adds strength to the hinge (col. 1, lines 45-56).

As discussed above the teaching of Budrow and Brankovic, either alone or in combination, do not teach or suggest Applicant's claims. The teaching of Knipe is directed to a hinge formed of alternating layers of material selected for some desired properties. Knipe does not teach or reasonably suggest an entire MEMs antenna device that is reconfigurable as recited in Applicant's claims. Further, Applicant respectfully submits that it is not at all obvious how the micro-hinge of Knipe would be employed in the macro – elevatable and foldable antenna design of Budrow, or in the antenna support structure of Brankovic. Finally, if one were to combine Budrow, Brankovic and Knipe one would not arrive at Applicant's claimed invention.

Based on the foregoing, Applicant respectfully submits that the application is now in condition for allowance. If any matters can be resolved by telephone, the Examiner is invited to call the undersigned attorney at the telephone number listed below. The Commissioner is authorized to charge any additional fees to Deposit Account No. 50-2319 (Order No. A-68000/MSS (464334-112)).

Respectfully submitted,

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